



Purpose

This document is to aid people working on Student Digital Pathways to have an understanding of the methods being used to identify the requirement for the project which will allow us to tender to the market. The document provides a description of the analysis method used within workshops and how/why this approach will be used throughout the project. It is deliberately written in an open non-technical manner.

Capability modelling

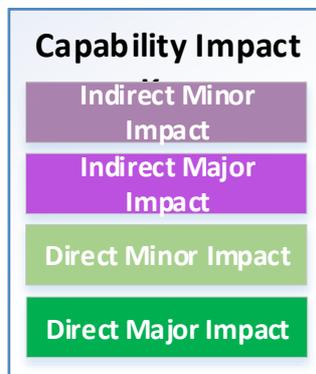
The project has adopted a methodology (tool) called capability modelling to derive the requirements for Student Digital Pathways. Capabilities are what the University does, or can do. They are not process, functions, services or units and are therefore far more stable over time, i.e. the University is likely to be a University in ten years and produce graduates (education) and research in ten years also. This approach has been chosen for a number of reasons;

- By examining the capabilities we will be examining the People (posts), Processes, policies, technology and data involved in Students Digital Pathways, this is a far more holistic view than the traditional approach of producing functional requirements. It will allow the University to understand the impact of decisions made around how the capabilities are delivered, i.e. what software products we buy and how this will impact the people and process parts of the capability
- It is important that the “University” understands that there will be impacts in these areas, because this project will affect the vast majority of staff, it is not just about changing Quercus, it’s about building the University’s capability to provide Students with a Digital Pathway through their lifecycle at NUI Galway, this means changes to
 - Data: what we collect and how we use,
 - Technology; what products we buy to serve what capability, and that we will be using the “vanilla” versions, no bespoke work
 - Processes; What processes, policies, and procedures will have to change as a result of specific technology choices
 - People; how the organisation structure and the skills/talents within these structures might be best aligned to provide the capability
- It allows us to examine what the high level requirements are, and have a level of certainty that they will be the same in a decade. It is a tool which is often when organisations are making large changes to the way in which capabilities are delivered across the organisation.
- Capabilities can be used in a neutral manner to remove emotion, we will not be asking an individual what they expect to do in 10 years, rather how a capability need will be met in 10 years, we will also avoid the question of which capabilities are more important to automate , or how the needs will ultimately be met in terms of functionality or systems, until we understand the benefits and costs associated with them

- Capabilities provide an easy to understand common model and language which we can use to ensure we have covered all areas in scope, ensure the University understands our scope, ensure the vendors can understand what we are asking for and importantly ensure we can assess the ability of the vendors to meet our capability needs

The project has used a baseline document drawn from UCISA, which is currently in use across multiple Universities within the UK and Ireland. This is relevant as we know that the base model is relatively stable. We have localised this model to NUI Galway and are using it as a reference to guide us through the workshops, it should serve to allow everyone to look at it and be able to self answer the questions of “have you thought about ...”. If it’s not included on this “map” we probably haven’t and would be grateful if you would let us know. This is a working model and we have tried to ensure that this, it’s first use, is accurate in the areas we need it to be accurate.

The model is on the next page and can be quite daunting at first to read, don’t forget it’s modelling the capabilities of the entire University. We’ve tried to make it an easy read and have setup a key which shows the Student Digital Pathways impacts areas overlaid with a colour key on the diagram. The key code is as follows:



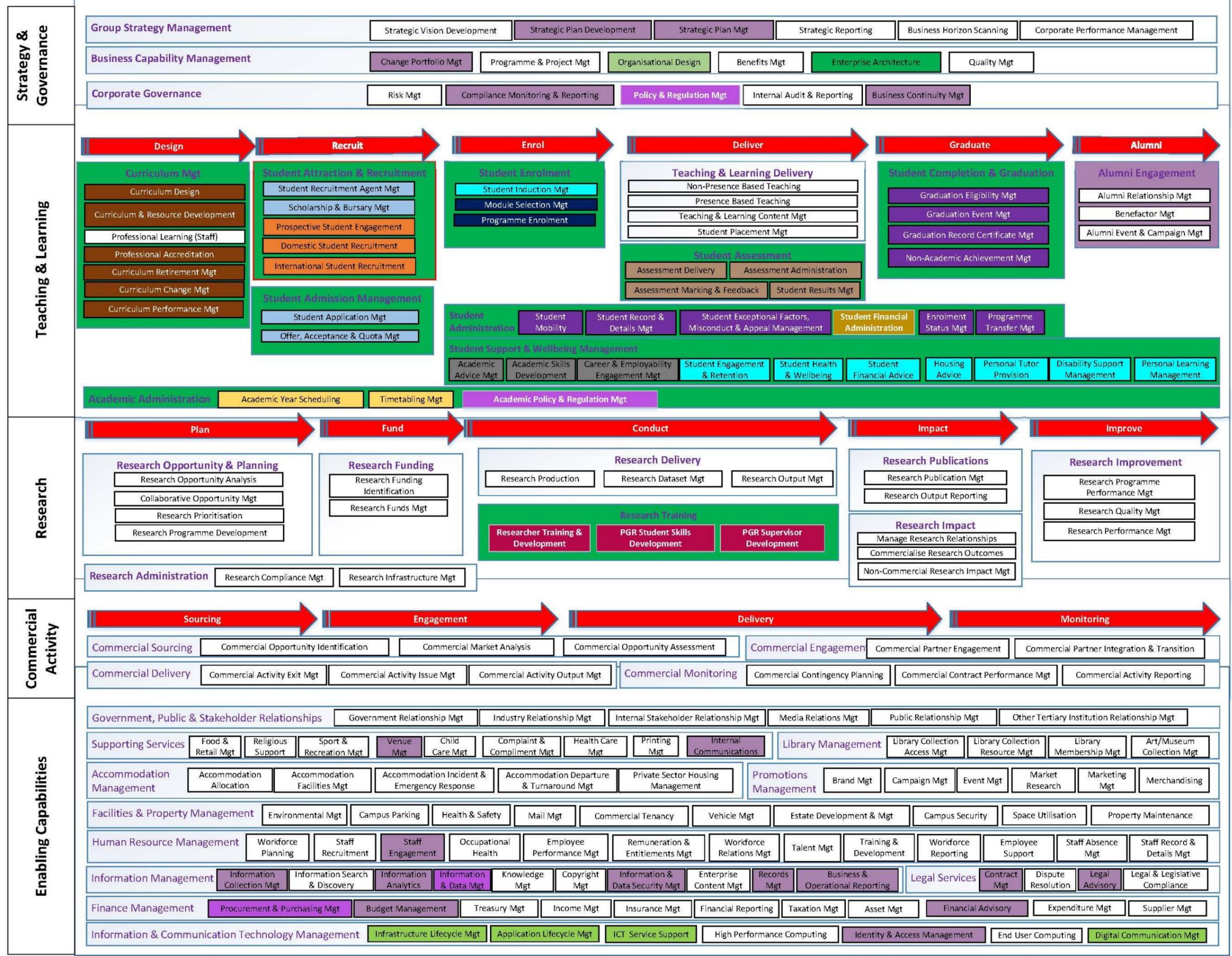
If you’re at a workshop your probably looking at one of the darker green areas, and you should be able to find it on the diagram below.

Student Digital Pathways Workshops to Capabilities Key

Admissions	Student Support & Wellbeing Management	Exam/Assessment processing	Registration	Student Progression	Student Financial Management
Class Scheduling/ timetabling		Curriculum planning and management	Student career and work placement	Student Recruitment	Graduate Studies

NUI Galway – Capability Model

Prepared By: John Lavelle/Michael Faherty
Date: August 2019
Project: Student Digital Pathways Project



- Locations:** Campus, Off-Campus, Online
- Market Segments:** Domestic & EU Students, International Students
- Products:** Short Courses, Bachelor Degree, Graduate Certificate, Graduate Diploma, Masters Degree, Doctor of Philosophy, Tailored Learning & Teaching Products, Research Publications, Intellectual Property Rights
- Consumers:** Prospective Students, UG Students, PG Students, Public Community, Commercial Partners, Funding Bodies, External Researchers
- Stakeholders:** National Govt, Local Govt, Staff, Students, Udaras, Sponsors, Prof Bodies & Reg Authorities, Accreditation Bodies, Suppliers, Local Community
- Capability Impact:** Indirect Minor Impact, Indirect Major Impact, Direct Minor Impact, Direct Major Impact

The “Map” – an outline of how it works

You’ll notice that there are rows and boxes, and boxes within boxes and there is a logic to this order, we will explain it here but we’re not giving an exam on it later. Essentially capabilities occur at level’s and we’re looking at levels down as far as level 3. The levels allow a level of examination of “capability areas” in a logical manner. These levels go from level 0 to level 3.

Level 0

The whole map. Essentially the capability of being a University. These are all the capabilities the University requires, grouped together on 1 page which make it capable of being a University. Remember these are not necessarily a person, Unit, process or systems, they are capabilities the University has.

Level 1

These are the grouped as “streams” which are logical groupings of capabilities which all Universities need, these are indicated in the left hand column and go from Strategy & Governance down to Enabling Capabilities. So reading right from Teaching & Learning the major steps in the lifecycle are highlighted in red arrows along the top of this Level 1. You will also see that within the Teaching & Learning Level 1 Capability that there are boxes colour coded, at a glance you can see that the majority of the boxes are colour coded, that’s because the majority of this level 1 capability will be impacted by the Student Digital Pathways project.

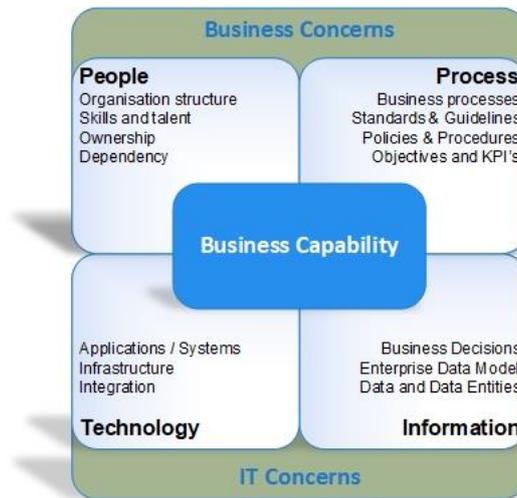
Level 2

Again these are the groupings of capabilities aligned with the at the next level down which are purely logical and directly related to each other, in this map the majority of the level 2’s are grouped under the high-level steps of the student lifecycle and this is easily understandable. So you will see that under the lifecycle step of Recruit, 2 level 2’s exist which are Student Attraction & Recruitment and Student Admissions Management. The other level 2 functions such as academic Administration are capabilities which span the lifecycle, and the Level 2 starts roughly at the point at which these capabilities are required in line with the lifecycle.

Level 3

These again are the logical “next level” down from the level 2. It is normally at this level where an element of confusion may start as people naturally start to look for their own Unit, post title or similar and how it’s aligned but please hold back from this and remember this is about the mapping of the capability. So under the level 2 of Student Admissions Management we have identified 2 level 3’s of Student Application Management and Offers, Acceptance & Quota Management.

At the level 3 Capability we are examining a number of things, People, Process, Technology and Data, in doing this we will have a more complete view of the changes which can be delivered into the Students Digital Pathway and the impact these changes will have on both the University and the Student. So a more detailed map of the Level 3 Capability is as follows;



The Student Digital Pathways project is setting out to complete the information above for each of the level 3 areas identified as in scope. For the purposes of the workshops and this phase of the project, Institutional Readiness and Pre-Procurement we need to get a PQQ (Pre Qualification Questionnaire) and a Tender Document ready issue. These are what the product Vendors will see and respond to. In order to ensure we have got these right and are ready for procurement we need to be in the following states for each of these areas.

People

A good first draft of what the people box looks like. We know the current structure, we have a view of the skills/talents, capability ownerships and cross dependencies, we just need to write this down and record it. We won't be sharing this during initial procurement conversations.

Process

This is the one which is actually **key at this phase**. The processes, with policies, procedures, etc will allow us to agree the requirements. It will allow this at a level (3), which is a level that most vendors in the market can respond, it's accurate enough to tell them what we want and yet still high level enough to allow them to contextualise within their specific products.

Technology

The process based workshops do not have to be concerned with this. There will be specific workshops later which will supply principles in the tender which NUI Galway wishes to apply to the technology. These will be such things as application availability, security, integrity, data integrations approaches, and infrastructure stability. In essence the Vendor's will complete this element of the capability for us, what we will be aiming for, technical simplification, should mean the technology is common across the majority of level 3's.

Information

Again much like technology the Vendor will be completing a lot of this, however this is an element of this which will be developed by NUI Galway over the course of the procurement cycle, this will be things like the completion of the Enterprise Data Model within the DanTe environment and how Student Digital Pathways will add to this.

Close out

It is hoped this document provides some clarity and understanding that the approach will allow NUI Galway to delivery on the Student Digital Pathways project. It will be an aid to the project in ensuring a common language, and therefore understanding, is available and that Capabilities needed are identified; this should give us enough information to allow appropriate decisions to be taken within the project, and importantly allow the University to understand these decisions.